

Appln. No. 10/031,160

Docket No. 304-777

Amendment

Reply to Office Action dated March 16, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 1. (Previously presented) A detachable sealing system for media-carrying parts
2 comprising:
3 a seal adjacent to a wall of a media-carrying area, which seals the sealing system when the
4 parts are braced against one another,
5 wherein the parts have mutually precisely complimentary sealing surfaces having
6 cross-sections with a mutually complementary S-shaped profile, which sealing surfaces are
7 directly pressed onto one another to form a clearance-free seal at a contact surface, and
8 wherein the contact surface between the sealing surfaces is limited to a narrow area directly
9 adjacent to the media-carrying area, the contact surface having a width of 1/5,000 to 1/50 of a
10 nominal width of the sealing system.

1 2. (Currently amended) A detachable sealing system for media-carrying parts
2 comprising:
3 a seal adjacent to a wall of a media-carrying area, which seals the sealing system when the
4 parts are braced against one another,
5 wherein the parts have mutually precisely complimentary sealing surfaces which are
6 directly pressed onto one another to form a clearance-free seal at a contact surface,
7 wherein the contact surface between the sealing surfaces is limited to a narrow area directly
8 adjacent to the media-carrying area. The sealing system according to Claim 22, wherein the
9 contact surface, and has a width of 1/5,000 to 1/50 of a nominal width of the sealing system,
10 wherein guide sections are provided on both parts, the guide sections situated transversely
11 to and spaced from the sealing surfaces, and

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12 wherein, for pre-centering of the two parts, the guide sections have at least one insertion
13 bevel for bringing the two parts together, and a separating gap is formed between the guide
14 sections for aligning the two parts before the sealing surfaces are pressed together,
15 the sealing surfaces having a mutual guidance transverse to the media area walls and being,
16 when pressed together, accurately fitting radially centered to each other,
17 whereby the media-carrying area walls of both parts are truly aligned.

1 3. (Previously presented) The sealing system according to claim 1, wherein the
2 contact surface is loaded with a specific sealing pressure, which is only in an elastic
3 deformation range of a material of which the parts consist.

1 4. (Previously presented) The sealing system according to claim 1, wherein in
2 addition to the sealing surfaces there is a mutual guidance transverse to the media area wall.

5. (Cancelled)

1 6. (Previously presented) The sealing system according to claim 1, wherein the
2 sealing surfaces are designed in such a way that a specific sealing pressure decreases from an
3 intersection line of a sealing gap between the sealing surfaces with the media-carrying area wall.

1 7. (Previously presented) The sealing system according to claim 1, wherein guide
2 sections are provided on both parts, the guide sections situated transversely to and spaced from the
3 sealing surfaces wherein, for pre-centering of the two parts, the guide sections have insertion
4 bevels for bringing the two parts together, and a separating gap is formed between the guide
5 sections for aligning the two parts before the sealing surfaces are pressed together.

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1 8. (Previously presented) The sealing system according to claim 1, wherein the
2 media-carrying area walls of both parts are truly aligned.

1 9. (Previously presented) The sealing system according to claim 1, wherein, adjacent
2 to the media-carrying area wall, the sealing surface of one of the parts has a sealing lip projecting
3 towards the other part and which is received in a corresponding half-recess on the sealing surface
4 of the other part.

1 10. (Previously presented) The sealing system according to claim 3, wherein the sealing
2 pressure is predetermined by a stop provided by a clamping device.

1 11. (Previously presented) The sealing system according to claim 1, further
2 comprising stop faces between the parts, which form a clearance between the parts before bracing
3 the parts together, whose width is sufficiently large that on bracing the sealing system up to the
4 closing of the clearance, a sealing predetermined pressure is built up by the elastic deformation of
5 the parts.

1 12. (Previously presented) The sealing system according to claim 1, further comprising
2 an elastically deformable portion of the parts interposed between a clamping device and the
3 sealing surfaces.

1 13. (Previously presented) The sealing system according to claim 1, wherein the sealing
2 system is a joint connection between two media-carrying parts.

1 14. (Previously presented) The sealing system according to claim 1, wherein the parts
2 are made from an equally hard material.

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1 15. (Previously presented) A method for the manufacture of a sealing system according
2 to claim 1, wherein the sealing surfaces are produced by profile precision turning by means of
3 mutually complementary profile cutting edges.

1 16. (Previously presented) The sealing system according to claim 1, provided for
2 aseptic applications.

1 17. (Currently amended) A detachable sealing system for media-carrying parts
2 comprising:
3 a seal adjacent to a wall of a media-carrying area, which seals the sealing system when the
4 parts are braced against one another,
5 wherein, the parts have mutually precisely complementary sealing surfaces which are
6 directly pressed onto one another to form a clearance-free seal at a contact surface,
7 wherein, the contact surface between the sealing surfaces is limited to a narrow area directly
8 adjacent to the media-carrying area. The sealing system according to claim 2, wherein the contact
9 surface has a width of between 0.01 and 1 mm,
10 wherein, guide sections are provided on both parts, the guide sections situated transversely
11 to and spaced from the sealing surfaces, and
12 wherein, for pre-centering of the two parts, the guide sections have at least one insertion
13 bevel for bringing the two parts together, and a separating gap is formed between the guide
14 sections for aligning the two parts before the sealing surfaces are pressed together,
15 the sealing surfaces having a mutual guidance transverse to the media area walls and being,
16 when pressed together, accurately fitting radially centered to each other,
17 wherein the media-carrying area walls of both parts are truly aligned.

1 18. (Previously presented) The sealing system according to claim 3, wherein the
2 specific sealing pressure is in the range of 20% to 80% of the yield point of the material forming
3 the parts.

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1 19. (Previously presented) The sealing system according to claim 6, wherein surface
2 portions of the sealing surfaces are provided as reserve sealing surfaces adjacent to the contact
3 surface, and which have a complimentary design.

1 20. (Previously presented) The sealing system according to claim 19, wherein an
2 annular clearance with a size of 1/15,000 to 1/500 of a nominal width of the sealing system is
3 provided between the reserve sealing surfaces.

1 21. (Previously presented) The sealing system according to claim 11, wherein the
2 clearance with is 1/15,000 to 1/100 of a nominal width of the sealing system.

22-25. (Cancelled)

1 26. (Previously presented) A detachable sealing system for media-carrying parts
2 comprising:
3 a seal adjacent to a wall of a media-carrying area, which seals the sealing system when the
4 parts are braced against one another,
5 wherein the parts have mutually precisely complimentary sealing surfaces having
6 cross-sections with a mutually complementary S-shaped profile, which sealing surfaces are
7 directly pressed onto one another to form a clearance-free seal at a contact surface,
8 wherein the contact surface between the sealing surfaces is limited to a narrow area directly
9 adjacent to the media-carrying area, the contact surface and having a width of 1/5,000 to 1/50 of a
10 nominal width of the sealing system, and
11 wherein, for pre-centering of the two parts, the guide sections have at least one insertion
12 bevel for bringing the two parts together, and a separating gap is formed between the guide
13 sections for aligning the two parts before the sealing surfaces are pressed together,

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14 the sealing surfaces having a mutual guidance transverse to the media area walls and being,
15 when pressed together, accurately fitting radially centered to each other,
16 whereby the media-carrying area walls of both parts are truly aligned,
17 further comprising stop faces between the parts, which form a clearance between the parts
18 before bracing the parts together, whose width is sufficiently large that on bracing the sealing
19 system up to the closing of the clearance, a predetermined sealing pressure is built up by only
20 plastic deformation of the parts.